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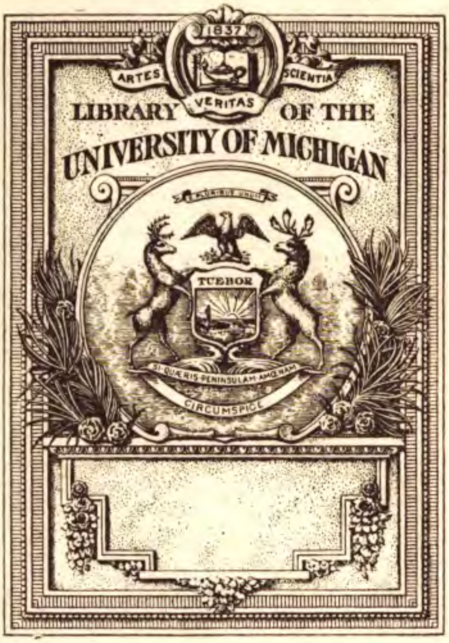
The Atlantic fleet in 1915.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64TH CONGRESS
1st Session

SENATE

DOCUMENT
No. 251

THE ATLANTIC FLEET IN 1915

LETTER FROM
THE SECRETARY OF THE U.S. NAVY

TRANSMITTING

IN RESPONSE TO A SENATE RESOLUTION OF JANUARY 8, 1916
THE ANNUAL REPORT OF THE COMMANDER IN CHIEF OF THE
ATLANTIC FLEET FOR THE YEAR ENDING JUNE 30, 1915
TOGETHER WITH A SUPPLEMENTAL REPORT OF
FLEET OPERATIONS TO OCTOBER 15, 1915

ALSO

A LETTER FROM THE SECRETARY TO THE CHAIRMAN OF
THE SENATE COMMITTEE ON NAVAL AFFAIRS TRANSMITTING
CERTAIN STATEMENTS RELATIVE TO THE ACTION
TAKEN BY THE NAVY DEPARTMENT TO ADVANCE THE
EFFICIENCY OF THE ATLANTIC FLEET

PRESENTED BY MR. CHILTON

JANUARY 25, 1916.—Ordered to be printed

WASHINGTON
1916

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64TH CONGRESS, 1st Session. } SENATE. { Ex. Doc. B, Pt. 1.

REPORT OF THE COMMANDER IN CHIEF OF THE ATLANTIC FLEET.

LETTER

FROM

THE SECRETARY OF THE NAVY,

TRANSMITTING,

IN RESPONSE TO A SENATE RESOLUTION OF JANUARY 8, 1916, THE ANNUAL REPORT OF THE COMMANDER IN CHIEF OF THE ATLANTIC FLEET COVERING THE YEAR ENDING JUNE 30, 1915, TOGETHER WITH A SUPPLEMENTARY REPORT ON FLEET OPERATIONS TO OCTOBER 15, 1915.

JANUARY 14, 1916.—Referred to the Committee on Naval Affairs and ordered printed in confidence for the use of the Senate.
JANUARY 19, 1916.—Injunction of secrecy removed.

THE SECRETARY OF THE NAVY,
Washington, January 11, 1916.

MY DEAR MR. VICE PRESIDENT: I am sending you herewith the annual report of the commander in chief of the Atlantic Fleet, dated August 15, 1915, in response to Senate resolution No. 60, directing this action.

The annual report of the commander in chief covers the year ending June 30 last, and since its receipt a supplementary report on fleet operations to October 15, 1915, has been received and is also forwarded herewith.

You will observe in several instances the insertion of stars to denote omissions. I have omitted several references of a strictly military nature.

Very truly, yours,

JOSEPHUS DANIELS.

Hon. THOMAS R. MARSHALL,
Vice President of the United States,
Washington, D. C.

COMMANDER IN CHIEF'S ANNUAL REPORT, FISCAL YEAR 1915.

~~**Part I. Operations of the Fleet.**~~
Part II. Condition of the Fleet.
Part III. Requirements of the Fleet.

UNITED STATES ATLANTIC FLEET,
U. S. S. "WYOMING," FLAGSHIP,
Newport, R. I., August 15, 1915.

From: Commander in chief.
To: Secretary of the Navy.
Subject: Annual report for period September 17, 1914, to June 30, 1915.
Reference: (a) Naval Instructions, article 916 (4).
Addenda: (a) Fleet gunnery officer's report.
(b) Fleet engineer officer's report.
(c) Fleet radio officer's report.
Addenda: (d) Fleet signal officer's report.
(e) Fleet tactical officer's report.
(f) Fleet athletic officer's report.
(g) Fleet naval constructor's report.
(h) Fleet medical officer's report.
(i) Fleet paymaster's report.
(j) Data called for by Naval Instructions, 916 (4).

1. I have the honor to submit herewith a report covering the period September 17, 1914, to June 30, 1915. In order to limit the report to moderate length it has been found necessary to omit discussions of the many satisfactory features of the fleet and to invite attention more particularly to its operations, condition, and requirements.

PART I. OPERATIONS OF THE FLEET.

ORGANIZATION.

2. With the approval of the Navy Department, several changes have been made in the organization of the Atlantic Fleet to effect a better coordination of the work of the administrative units. At present the fleet is organized as follows:

Wyoming (flagship of commander in chief).
Battleship squadrons (Vice Admiral H. T. Mayo).
Cruiser squadron (Rear Admiral W. B. Caperton).
Destroyer squadron (Capt. W. S. Sims).
Submarine flotilla (Capt. A. W. Grant).
Mining and mine-sweeping division (Commander R. R. Belknap).
Auxiliary division (Commander U. T. Holmes).

This organization of the fleet into six administrative units relieves the commander in chief from the burden of many details and enables him to devote more time to the larger subjects of strategy, tactics, and operations of the fleet.

The battleship squadrons consist of two active squadrons, at present operating together under the command of the vice admiral. By keeping all ships of a type under one organization there results a more uniform training, a keener competitive spirit, better administration; in short, a more systematic development.

The cruiser squadron comprises all the cruisers and gunboats in the fleet not attached to other organizations. As this squadron expands it will be necessary to separate it into two or more squadrons. At present one squadron commander can efficiently direct the work of the vessels in this organization.

The destroyers of the fleet are organized into divisions of five destroyers each, and the divisions are formed into flotillas of four divisions each. The flotillas are organized under one administrative command as a squadron in accordance with the general principles of organization of other units of the fleet. Additional flotillas will be organized as new destroyers are commissioned until the destroyer squadron is composed of four flotillas, which will complete a unit of a well rounded out fleet as required by the program of the general board, which calls for four active destroyers with each battleship. The number of destroyers that can be effectively administered as a flotilla, with 1 tender, is limited to about 16 to 20. When the *Melville*, being completed, is commissioned and added to the fleet she will be available as a tender for a third flotilla now in process of formation.

The submarine flotilla consists of four divisions of submarines, one of which is permanently stationed at Colon. As this organization grows with the addition of several divisions of new submarines it will be necessary, as in the case of the destroyer flotilla, to organize the whole force into a squadron or two or more flotillas.

The mining and mine-sweeping division consists of two mine layers and four seagoing tugs. Vessels assigned to the fleet and especially fitted and intended primarily either for mining or sweeping will be placed in this division. Mining has become an important branch of naval warfare, and every effort should be made to further develop this division.

The auxiliary division comprises all fuel ships, supply ships, repair ships, ammunition ships, hospital ships, etc., not attached directly to any other unit of the fleet.

BATTLESHIP SQUADRONS.

3. Upon the completion of the fall target practice the vessels of the fleet were sent to the navy yards to prepare for the cruise to San Francisco in March. This cruise was subsequently abandoned. The battleships and destroyers sailed for Cuba on January 17 and carried out two important strategical problems en route. In the first problem a superior battleship force leaving New York attempted to prevent the joining of inferior forces leaving Boston and Norfolk. Owing to the lack of any cruisers or scouting vessels attached to the fleet, it was necessary to assign a number of destroyers to each force to act as scouts. In the moderate seas encountered the destroyers proved ineffective for scouting work. Due to its inability to obtain information of the movements of the opposing forces, the superior force failed in its mission, and the inferior forces joined without difficulty.

The combined forces then assembled off the Virginia capes and began problem No. 2. In this problem a destroyer force off Charleston was assigned the task of intercepting and attacking a battleship force proceeding to the West Indies. The destroyers succeeded in locating the battleships and delivered an attack before reaching the West Indies.

Both of the problems played en route to Cuba developed a number of points of professional value, which were brought out by conferences of the officers of the fleet and reported to the department in detail.

4. While in Cuba, in addition to the usual drills and target practices carried out by individual ships, the battleship squadrons and the destroyer squadron engaged in a number of combined maneuvers. Many of these maneuvers were carried out at night and were designed for the primary purpose of developing the offensive power of destroyers under various conditions and the proper methods of defense of battleships against destroyer attacks. The maneuvers proved instructive and resulted in valuable experience to the personnel. Separate reports of the maneuvers have been forwarded to the department.

The battleships completed all the torpedo practices and torpedo defense called for by the winter schedule of target practice.

Advantage was taken of the excellent rifle ranges at Guantanamo to afford the personnel of the whole fleet ample practice at small-arm firing.

Baseball, boat races, swimming, and all forms of athletic contests were carried out in accordance with program.

The facilities afforded in the vicinity of our winter base at Guantanamo for drilling, training, and exercise is a great asset in the maintenance of efficiency of the fleet.

5. *Tactics of the battle line.*—A considerable part of the winter maneuvers was given up to developing tactics of the battle line, with satisfactory results. Eighteen battleships was the greatest number that could be gotten together in one formation at any time for these exercises. These maneuvers were accomplished without difficulty, with a minimum of signals and with little decrease in the accuracy of gunfire, and the enemy at all times kept under the full fire of the battle line. The principles involved in these tactics of the battle line have been demonstrated to be sound and of easy application.

6. *Spring gun and torpedo practices.*—Upon completion of the winter maneuvers the fleet assembled off the Virginia capes in April and engaged in the various forms of gun practice and torpedo practice.

7. *Review in New York, May 8–18.*—Immediately on the completion of target practices the fleet was assembled in New York for a review by the President. The fleet was cordially welcomed and entertained by the city of New York and great interest manifested in the different types of ships. The fleet was reviewed at anchor May 17 by the President and again on May 18, as the fleet steamed out to sea.

8. *Department's strategical problem No. 1, May 18–25.*—On leaving New York May 18 the fleet proceeded to sea to carry out strategical problem No. 1, as directed by the department. During this problem all vessels of the fleet were operating night and day until its completion on May 25. This problem proved the most instructive to officers and men of any in which the fleet has been engaged. In the operations of this problem many satisfactory fea-

tures in the fleet were developed and the requirements of the fleet were brought out. Full reports have been made to the department.

9. *Spring docking.*—After completing the department's problem the fleet was dispersed and sent to the various navy yards for docking, stores, and minor repairs until June 20. The fleet was directed to reassemble in Narragansett Bay as soon as practicable after June 20 for the summer drills and exercises. A full schedule of these exercises, lasting until the completion of target practice at the end of September, has been approved by the department.

CRUISER SQUADRON.

10. The cruiser squadron, assigned to the important duty of guarding American interests in Caribbean and Mexican waters, has been fully occupied on this arduous duty, with little opportunity to visit home waters. The work of this squadron has greatly assisted fleet training by freeing battleships and destroyers for their regular drills and exercises. This squadron has been occupied throughout the entire year with duties that have kept it away from exercises with the combined fleet. All the ships of this squadron are required for service in southern waters, and there are not enough vessels available to engage in any exercises calling for scouting and cruiser work. There is attached to this squadron a division of armored cruisers, but owing to the exigencies of the service they have never been able to operate together or with the fleet. The fleet is thus deprived of the benefits of any exercises calling for scouting or cruiser work. One of these cruisers is diverted to duty in connection with aviation; another is used in connection with experimental torpedo work. This division of armored cruisers would constitute an important unit of the fleet and would probably be the first called upon for active operations. As soon as additional officers and men become available these cruisers should be brought together into one division to be operated with the fleet during all war games and maneuvers. This division of armored cruisers should be fully manned to operate in the training of the fleet in all war games and combined maneuvers, but owing to the services required of them many have not been able to complete their regular overhaul and target practices.

DESTROYER SQUADRON.

11. The destroyers have been operating with the battleships in all the fleet drills and exercises. During the winter maneuvers in the vicinity of Guantanamo they completed all their steaming exercises, target practices, and other work called for by the schedule of employment. They operated with the battleships in scouting, searching, in night attack, and in carrying out certain experimental work in mining and sweeping. Upon coming north from the winter exercises, the regular target practice was carried out. They joined the fleet in the review in New York and operated in strategical problem No. 1.

A number of destroyers have been engaged in neutrality service off the ports of New York, Boston, and for a time San Juan. This assignment of destroyers has interfered somewhat with the training and exercises of the destroyer squadron. Destroyers on this service are relieved frequently, but their absence from the fleet sets them back in their development.

SUBMARINE FLOTILLA.

12. While the battleships and destroyers were operating in Cuban waters, the submarines, mine layers, aircraft, and reserve destroyers engaged in a series of combined exercises off Pensacola.

* * * * * * *

The submarines left Pensacola in time to arrive in the North River for the naval review on May 8, after which they proceeded to sea with the fleet on May 18 to engage in department's strategical problem No. 1. Their duties required them to operate some distance at sea until they were directed to seek shelter on account of storm warnings, after which they operated along the New England coast, successfully utilizing the Cape Cod Canal to expedite their movements.

ANNUAL PROGRAM.

13. The present plan of operations of the fleet, which has been in effect for several years past, to have our winter drills and maneuvers in the vicinity of Guantanamo and southern ports during the winter, and to have drills and exercises based on Narragansett Bay in the summer, has proved very satisfactory for the training of the fleet. As the fleet becomes further developed in the building up of its units, it will be necessary to have more combined exercises of the different squadrons by playing war games and strategical and tactical problems.

PART II. CONDITION OF THE FLEET.

PERSONNEL.

1. *Shortage of officers.*—The most vital weakness in the Atlantic Fleet is the shortage of officers. It takes approximately 10 years to educate and train an officer, and no amount of legislation can provide officers when trouble is imminent. Expansion of the Navy is limited by the number of officers available. The fleet is handicapped not alone by the shortage of officers, but by the inexperience of the large number of young officers that have been added to the Navy in the last few years. This condition, coupled with the shortage of officers, has resulted in officers being ordered to duties beyond their capacities and for which their experience and judgment do not fit them.

In January, 1915, I reported that every battleship of the Atlantic Fleet should have the number of officers increased approximately 40 per cent to enable the vessels to attain their greatest efficiency. This shortage of officers still continues and exists in the other divisions of the fleet, though more pronounced in the battleship squadrons. Owing to short enlistments our men require continuous training and any shortage of officers is certain to result in a lessening of efficiency.

I respectfully invite the attention of the department to a comparison between the number of officers in our battleships and the number in the two leading navies of the world. I have selected for this comparison the *Delaware*, of our Navy, the *Bellerophon*, of the

British Navy, and the *Helgoland*, of the Germany Navy. The *Delaware* was selected by the General Board as the standard vessel in comparing our material strength with that of other navies, and I have taken the same vessel in making a comparison of personnel strengths. The *Delaware*, *Bellerophon*, and *Helgoland* are all battleships of approximately the same speed and displacement.

Comparison of complements of officers.

Rank of officers.	Delaware.[1]	Bellerophon.	Helgoland.
Captain	1	1	1
Commanders	2	2	2
Lieutenant commanders	2	5	7
Lieutenants	2	7	8
Lieutenants (junior grade)	3	4	11
Ensigns and midshipmen	11	12	7
Marine officers	2	2	0
Surgeons	2	3	2
Paymasters	1	2	2
Chaplains	0	1	0
Boatswains (estimated)	1	2	2
Gunners (estimated)	2	6	4
Carpenters (estimated)	1	1	1
Machinists (estimated)	3	4	4
Clerks (estimated)	1	1	1
Total number of officers	33	53	54

[1] Officers on board June 1, 1915.

A personnel board appointed on the *Delaware* in 1914 stated that the complement of officers necessary was 54. A similar board working independently on the sister ship, *North Dakota*, reported that their complement should be 53.

The foregoing data were taken from official publications. They are in no sense war complements, but those that obtained prior to lieutenant there are in the *Delaware*, 9; *Bellerophan*, 19; *Helgoland*, is not known, but as the Germans have proportionately more warrant officers than any other navy, the number assumed is the same as the number in the *Bellerophon*.

It will be seen that in line officers of or above the grade of junior lieutenant there are in the *Delaware*, 9; *Bellerophon*, 19; *Helgoland*, 29. In other words, in officers of experience the *Delaware* has only half as many as the *Bellerophon* and one-third as many as the *Helgoland*. In the total number of officers the complements of both the *Bellerophon* and the *Helgoland* exceed that of the *Delaware* by more than 60 per cent.

The shortage of officers is not confined to battleships, but exists in all types of ships. For instance, assigned to the important duty of guarding the approaches to the Panama Canal there is a division of five submarines, in each of which there is but one officer, and in four of these five submarines the officer is of the rank of ensign but recently graduated from Annapolis.

In the recently completed battle efficiency inspection of the second division of battleships, the division commander makes the following comments:

> At general quarters in the U. S. S. *Utah*, a chief petty officer is in charge of one turret and an ensign graduated in 1914 is in charge of another. There are no officers for handling rooms and no officers available for the after range finder. The torpedo room is in charge of a chief petty officer and the torepdo officer,

> stationed in the conning tower, is of the class of 1914. In the plotting room a pay clerk and a yoeman are performing work which requires commissioned officers of the line.
>
> The following shortages exist: *Florida*, 29 officers; *Utah*, 28 officers; *Michigan*, 21 officers; *South Carolina*, 16 officers.

Reports and comments similar to the foregoing come with great frequency before the commander in chief and could be quoted in great number. The shortage of officers necessitates a great deal of transferring of officers to other duties, both within the ship and to other stations, with a consequent loss in the efficiency of the ship. The commanding officer of one of the battleships in a recent official report states:

> In the 18 months that I have commanded this ship she has had 3 executive officers, 2 senior engineer officers and 3 assistants, 2 navigators and 2 acting, 4 first lieutenants, 7 gunnery officers (not counting 2 ordered who never reported), and 12 turret officers, or an average of a new turret officer in each turret every six months.

I desire to reiterate that the shortage of officers is the greatest weakness in the Atlantic Fleet and a matter meriting the serious consideration of the department.

2. *Shortage of enlisted men.*—Second in importance to the shortage of officers is the shortage of men. The shortage of men is put as of secondary importance to that of officers, since there will always be a reserve of trained men, and untrained men can be made efficient in much less time than is required for developing officers. The shortage of men in the Atlantic Fleet, coupled with the shortage of officers, has prevented the fleet from attaining the degree of efficiency that is to be expected. Too much emphasis can not be placed on what I believe to be the most serious weakness in the fleet to-day—lack of trained officers and shortage of enlisted men. To equalize the shortages in the different vessels there results a constant exchange of officers and men, tending to promote instability and to weaken the efficiency of the various units of the fleet. With few exceptions every vessel in the Atlantic Fleet is short of the complement of officers and men necessary for battle. The shortage of enlisted men in the battleships alone, as I reported in January, 1915, exceeds 5,000 men.

This shortage of men has been revealed in every operation of the fleet and has been reported on in inspections throughout the year. Conditions have not improved, and at the close of the fiscal year the shortage of men was greater than at any other time of the year. In one division of four battleships the division commander, in his June inspections, reported a shortage of 1,350 men, or an average shortage of more than 300 men in each ship.

The shortage of enlisted men, like that of officers, exists in all types of ships in the fleet. A captain of one of the mine-laying cruisers reports "the existing shortage in the vessel's complement now amounts to 25 per cent of the whole and 30 per cent in the seaman branch, resulting in a serious handicap to the ship's work."

During the year the department reduced the allowed complement of destroyers approximately 25 per cent, and these important vessels are now operating with reduced complements.

It is evident that undermanned and underofficered ships can not be kept in a state of preparedness and efficiency to meet on equal terms similar types in other navies.

MATERIAL.

3. *Battleship squadrons.*—In general the material condition of the battleship squadrons is very good, both in hull and in machinery. The greatest material weakness of the battleships has been that of the shafting of the *Connecticut* class of vessels. Experience has shown that, with the possible exception of the *Kansas*, the six battleships of the *Connecticut* class are unreliable at fleet speeds between 12 and 15 knots. The experiments to be conducted with the *Minnesota* may prove of value in permitting steps to be taken to overcome the excessive vibration at the speeds mentioned that has caused the breaking of so many shafts in this class of battleships.

4. *Cruiser squadron.*—The machinery conditions of the cruiser squadron can not be said to be satisfactory. Owing to the small number of vessels in the cruiser squadron and the number of stations to which they have been assigned, it has been impracticable to have these ships regularly overhauled or to have them conduct target practices and exercises with the fleet. During the past year only two of the small vessels of this squadron completed their target practice. An increase in the number of ships will improve conditions and permit a more efficient development of this squadron.

5. *Destroyer squadron.*—The destroyer squadron is in good material condition, both as regards hull and machinery, with the exception of the following-named destroyers:

Warrington. Machinery defective in design.

Henley. Machinery defective in design, with some defective material.

Aylwin. Excessive vibration at speeds above 15 knots, and defective alignment of shafting.

Downes (not finally accepted by the Government). Excessive fuel consumption compared to other destroyers.

Mayrant and *Duncan.* Out of commission, due to defective machinery design.

With the foregoing exceptions, the other vessels in the destroyer squadron have been maintained in good condition, largely through the assistance rendered by tenders and repair ships.

6. *Submarine flotilla.*—The condition of the submarine flotilla has been very unsatisfactory, particularly the condition of the machinery of these vessels. So much time has been required to keep the machinery in condition that little time has been available for training officers and crews to operate their ships. The submarine flotilla, even more than the other types of vessels in the fleet, has been hampered by lack of officers of experience. While there are 12 submarines in full commission assigned to operate with the fleet, only 6 of these vessels were in condition to proceed to Pensacola for the winter's work. All 12 were assembled in May in New York, but only 10 were available for the war problem May 18–25. Of these 10 a number were soon incapacitated by machinery troubles, and at times not more than 5 submarines were ready for duty. Due to untrained crews, some of the 5 were not ready to undertake submerged work. In the coming year an effort will be made to overcome the difficulties previously encountered, and the schedule of employment will assign the greater part of the year to individual work. The flotilla has the double task of making the various units

effective and at the same time developing and training crews for the new submarines nearing completion.

6a. *Steaming trials.*—I renew my recommendation previously made that in competitive steaming trials ships be not permitted to run above their designed speeds. In the effort to attain a slight increase in speed there is danger that the machinery will be worked beyond its designed capacity, and damage will result. In time of war, when the situation demands it, all possible speed should be attained, but in competitive steaming trials the designed standard should not be exceeded.

7. *Communications.*—I am pleased to report considerable progress in the important element of communications, particularly in radio signaling. In playing the department's strategical problem No. 1 the radio service was mobilized, and all messages were sent in code. Several hundred messages were handled among ships of the fleet and between ships and shore stations with remarkably few errors.

* * * * * * *

Visual signaling has been held back in its development by lack of officers to assign to signal duty. The standard of signalmen has been raised by the department's policy of sending from the training stations men who have been specially picked and trained for signaling.

* * * * * * *

PART III. REQUIREMENTS OF THE FLEET.

1. *Complements of ships.*—I believe that all ships in full commission attached to the active fleet should be kept fully manned for battle, ready for any duty to which they may be called. In no other way can the units of the fleet be kept in a thoroughly efficient state. I am of the opinion that such ships as are maintained in the active fleet should be kept in efficient battle condition at all times. A reduction of complements in order to permit additional vessels to be commissioned I consider unwise from every point of view. Vessels in commission should either be on a reserve basis or on a full battle complement. There is no efficient compromise between these two standards.

There are at present attached to the fleet 11 destroyers with one-half complements, a makeshift brought about by the shortage of personnel. As a result of this shortage the training of these destroyers is not complete, and the limiting conditions brought about by the restricted activities of one-half complements lead to false conclusions and requirements.

I therefore recommend that all active ships assigned to the Atlantic Fleet be kept fully manned at all times, and that additional officers and men, when they become available, be assigned to fill the shortages now existing in the fleet.

2. *Composition of the fleet.*—The operations and maneuvers carried out during the year have emphasized the lack in the fleet of certain important types of vessels. These exercises have demonstrated the wisdom and soundness of the principles governing the recommendations of the general board as to the number and types of the various vessels required to constitute a well-rounded fleet. In fleet problem No. 1, played in January while en route to Guantanamo, two inferior

forces were enabled to evade a superior dreadnaught force as the latter failed, through absence of cruisers, to locate either inferior force. A few days later, in problem No. 2, our main body was located and tracked by destroyers, owing to our lack of scouting vessels and cruisers. Our fleet lacked the fast cruisers that are necessary to give information of the position of the enemy as well as to deny the enemy information of our position and to screen our own forces.

In department's strategical problem No. 1, played May 18–25, the lack of heavily armored fast vessels and light cruisers was especially felt. For seven days, from the start of the problem until it ended, the Blue commander in chief has no reliable information of the position or movements of the enemy, while the enemy, due to superior cruiser force, was well informed of our movements and dispositions at all times. The destroyers demonstrated their ability in operations of this character. It is believed that had we possessed an efficient force of fast seagoing submarines in this problem they could have been utilized to great advantage.

3. *Destroyers as scouts.*—The winter's work made it evident that destroyers are quite unsuited for scouting except under very favorable circumstances. Their radio communication is reliable for short distances only. Their reliance for safety is based entirely on their speed and in moderately rough seas their speed is so much reduced as to render them a prey to fast enemy cruisers. Aside from the reduction of the speed there is a loss in efficiency of destroyer personnel subjected for several days to rough weather. Destroyers in no sense can be relied upon to take up the duties of fast cruisers, but their value to the fleet in other ways is very great.

4. *Mining and mine sweeping.*—With the approval of the department there has been organized a mining and mine-sweeping division. At the present time there are no vessels in the Atlantic Fleet for mine sweeping of a type that has proved successful abroad. The four tugs fitted with sweeping gear are of too deep draft to make them efficient mine sweepers, and of too costly a type to utilize in such work. Destroyers can be used in emergency, but they are much too costly and not suitable vessels for handling heavy sweeps, and the light sweeps provided for them are not effective in dislodging heavy mines.

Light-draft trawlers or tugs seem to be the most effective types of sweeping vessels and should be added to the fleet for this purpose.

As practically the entire Atlantic seaboard is capable of being mined it would be necessary in war to precede the movements of the fleet, while on soundings, with sweeping vessels and it is important that mine-sweeping methods and equipment be developed at an early date and that available trawlers be organized into a reserve for use in war.

5. *Lack of air craft.*—To assist in locating the enemy during the war problem May 18–25, weather conditions were such that air craft would have been of considerable assistance. I consider it important that this branch be developed and as soon as practicable air craft be assigned to operate with the fleet, when engaged in combined maneuvers, to assist in controlling gun fire, locating mine fields or submarines, and in operations of a special nature.

6. *Department's strategical problem No. 1.*—This problem, played May 18–25, proved of value to all concerned. Separate report has

already been submitted to the department covering the various operations. The principal deficiencies noted in our fleet were as follows:

(*a*) Shortage of personnel, both in officers and men.

(*b*) Lack of fast armored ships and fast light cruisers, both for scouting and screening.

(*c*) Lack of air craft.

(*d*) Lack of mining and sweeping units.

(*e*) Lack of speed in our present cruisers.

(*f*) The limitations of mobility and seagoing qualities of most of the present submarines.

(*g*) Lack of radio direction finder.

7. *Mobilizing ships in reserve.*—As soon as the present shortage of officers and men is relieved, the ships in reserve should be mobilized annually with full complements with the active fleet.

As a number of the ships now in reserve would undoubtedly be added to the active fleet in the event of hostilities, it is necessary that the weaknesses of the reserve ships be developed by permitting as many as practicable to cruise with the active fleet for a few weeks annually.

Experience demonstrates that the methods of training, communication, and handling the fleet, change so rapidly that it is necessary for all officers and men to maintain touch with the active fleet. and the material of ships in reserve is best tested out by active cruising.

8. *Target practice.*—The experience of the present war has shown the necessity for developing long-range firing.

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I desire to point out the present unsatisfactory methods of determining the qualifications of pointers—that is, by scores at elementary practice. An analysis of the elementary practice of the *Michigan*, *Kansas*, and *Louisiana* shows that the fire-control error is in general approximately twice as great as the error of the pointer. Under present methods the fire-control error may counteract the pointers' error and a badly aimed shot make a hit. As but three turret shots are fired by a pointer for qaulification, it is evident that fire-control errors may counteract bad pointing and a good score result, while in other cases the score of a good pointer may be ruined by fire-control errors. The score alone is insufficient for grading pointers. While I recognize, from other considerations, the value of elementary practice, I believe that for grading pointers a method combining check telescope and subcaliber drills with a physical examination for vision and nervous temperament, and a consideration of the general character and ability of the man, would prove superior to the present system. Further data will be collected in the next elementary practice with a view of developing a fair method of grading pointers and of ascertaining and eliminating all avoidable sources of error in gunfire.

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It is unfortunate that the hazy weather prevailing on the southern drill grounds during April did not permit the completion of the different forms of experimental practice.

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Due to the small number of vessels in the cruiser squadron and the important duties performed by these vessels, most of the vessels in that squadron did not complete their target practices during the year. This failure is regretted, as the efficiency of a ship can not long be maintained without testing and practicing with the weapons supplied.

There are a number of armed vessels in the submarine flotilla that should be required to hold target practice, in order to keep these vessels in readiness for war.

It is recommended that, if practicable, provision be made for divided fire and concentrated fire during the year's practice in order that ships will be trained for conditions that will likely exist in battle.

It is conclusively shown that the number of hits at target practice does not depend upon the gun pointers or guns' crews alone, but it is the combination of gun control, fire control and ship control. The present method of awarding prize money to the gun pointers and guns' crews alone is manifestly incorrect. I have the honor to renew my previous recommendations on this subject, that all prize money for excellence at target practice be awarded to the ships making the highest scores.

I consider it important that the department investigate the possibilities of providing grape shot or a similar form of ammunition for use of turret guns in repelling destroyer attacks.

Attention in invited to the recommendations of the fleet gunnery officer in regard to the various forms of target practices, which recommendations meet with my approval.

9. *Entanglements and nets.*—The development of entanglements in the form of nets, booms, and other obstructions as a protection against submarine and destroyer attack, and floating mines, should receive active consideration by the bureaus concerned. Material of this kind should be developed and issued to the Mining and Mine Sweeping Division to be employed in fleet exercises.

10. *Anti air-craft guns.*—There are no anti air-craft guns supplied the vessels of the fleet. I consider it important that a limited number of such guns be supplied as early as practicable, and that a special form of target practice against kites and captive balloons be engaged in annually to develop the guns' crews and the weaknesses in the material supplied.

11. *Need of division commanders.*—It is desirable in order to permit a more rapid development of the mining and mine-sweeping division and the auxiliary division, to provide commanders for these divisions.

At present the senior captain of the auxiliary division (in the *Vestal*) is responsible for the technical work in connection with the repairs and maintenance of the fleet in addition to his duties as captain of the ship and to the administrative work in his division. A similar condition exists in the mining and mine-sweeping division.

Division commanders, with appropriate assistants, should be assigned to command each division in order to allow for a proper development of these important units of the fleet.

12. *Additional naval constructors.*—I approve the recommendation of the fleet naval constructor contained in the appended report, recommending that a naval constructor be assigned to each of the following units of the Atlantic Fleet: Battleship squadrons, cruiser squadron, destroyer squadron, submarine flotilla.

OVERHAUL PERIODS.

13. *Battleship squadrons.*—Experience in the fleet has demonstrated that the present frequent overhaul periods for battleships do not give the most efficient results. Ships that go into overhaul after only one year of service with the fleet are in a generally satisfactory condition and could, to advantage, be continued with the fleet for at least an entire year more.

I recommend that the present schedule of battleship overhauls provide for an overhaul of each ship at the end of a two-year cruise instead of at the end of one year as at present. Battleships utilizing their own resources as well as those of repair ships, are quite able to maintain themselves in an efficient state for a period of at least two years.

The battleship squadrons are composed of 21 vessels in active commission. Four of these are normally overhauling, leaving 17 battleships to operate with the fleet. Five of these 17 battleships are withdrawn owing to various causes affecting material and personnel, beyond control of the fleet, leaving only 12 battleships operating with the fleet at the present time. It is believed that this condition will be materially improved and the battleship squadrons be kept more intact if the foregoing recommendations in regard to overhauls be carried out.

Attention is invited to the fact that if the two-year overhaul schedule recommended for battleships is adopted, and the overhauls started in January and July, a fairly continuous flow of work will be provided for the navy yards, as the destroyer squadron and the submarine flotilla, together with a considerable number of tenders, will be coming to the yards at about the time when the work on the battleships is being completed. The flow of navy-yard work can be still further regulated by overhauling vessels of the mining and sweeping division and vessels of the auxiliary division at periods when the yard work is slack.

14. *Cruiser squadron.*—Attention is invited to the recommendations of the commander of the cruiser squadron, making provisions for overhaul of ships in that squadron and the rotation of duties in connection therewith. Some of these vessels are already in a far from satisfactory condition, and unless some regular schedule for them can be provided and adhered to, these ships can not be expected to be in condition when called upon.

15. *Destroyer squadron.*—The present overhaul schedule for the vessels of the destroyer squadron is satisfactory for the present number of vessels in this squadron. The entire destroyer squadron is overhauled during the months of May and June, and again during November and December.

16. *Submarine flotilla.*—The present overhaul schedule of the submarine flotilla is satisfactory for the limited number of vessels in that flotilla. The submarine flotilla is overhauled from May 1–June 15, and from November 1–30.

17. *Fleet rendezvous.*—Suitable rendezvous for a fleet constitute an important factor in its efficient operation, either in time of war or in time of peace. Such places should have ample facilities for berthing, fueling, provisioning, and handling the personnel of the fleet. Three principal and suitable rendezvous have been and probably

always will be utilized by the Atlantic Fleet, namely, Narragansett Bay, Hampton Roads, and Guantanamo.

As the fleet is growing in size the berthing space in these three harbors for heavy-draft vessels is already being well occupied. In Narragansett Bay all desirable berthing space for destroyers and submarines in the vicinity of the harbor and the landings is already fully occupied and additional vessels will have to be sent some distance up the bay. There should be provided at Melville, or some suitable point in the bay, a number of piers and slips similar to those at the torpedo station, where vessels of this character can berth and rapidly refuel, reprovision, and maintain themselves in a better state of readiness. Such facilities will probably require an appropriation by Congress.

Similarly, at Hampton Roads the facilities for destroyers and submarines are not satisfactory. The anchorage for destroyers is insecure with the fresh winds and strong tides that prevail there during the winter. The facilities for handling the personnel of the fleet are quite inadequate. Looking to the future when one complete fleet will have to base upon this point for its operation, proper provisions should be made in advance, particularly for small craft.

In compliance with the department's directions a board has been appointed to consider the subject in Narragansett Bay, and the conditions at Hampton Roads will be similarly treated.

18. *Educational system.*—I desire to reiterate the recommendation of my predecessor in command of the Atlantic Fleet, Rear Admiral C. J. Badger, that greater efficiency to the service will be obtained by abolishing the compulsory feature of General Order No. 63, of December 16, 1913. With the compulsory feature omitted there will be more facilities for teaching and helping those who are ambitious to advance themselves.

19. *Staff reports.*—Attention is invited to the appended reports of my staff covering in detail many of the subjects already discussed in this report.

20. *Résumé.*—In brief, the principal weaknesses and requirements of the fleet are as follows:

(*a*) Shortage of officers.
(*b*) Shortage of men.
(*c*) Lack of fast armored ships and fast light cruisers.
(*d*) Limitations of mobility and seagoing qualities of submarines.
(*e*) Lack of aircraft.
(*f*) Lack of radio direction finder.
(*g*) Too frequent overhaul of battleships.
(*h*) Necessity of maintaining full complements in active ships of the fleet.
(*i*) Need of additional mining and sweeping vessels.
(*j*) Desirability of mobilizing ships in reserve annually with the active fleet.
(*k*) Need of battle target practice at long ranges.
(*l*) Necessity for increased facilities at fleet rendezvous.
(*m*) Provision for division commanders for mining division and auxiliary division.
(*n*) Provision for more speed in design of fighting craft intended to operate with the fleet.
(*o*) Need of anti air-craft guns.

F. F. FLETCHER.

SUPPLEMENTARY REPORT ON FLEET OPERATIONS TO OCTOBER 15, 1915.

UNITED STATES ATLANTIC FLEET,
U. S. S. WYOMING, FLAGSHIP,
Navy Yard, New York, N. Y., October 26, 1915.

From: Commander in chief.
To: Secretary of the Navy.
Subject: Supplementary report on fleet operations to October 15, 1915.
Reference: (*a*) Commander in chief's annual report, No. 716–15 (15) of August 21, 1915.

1. Since forwarding my annual report of August 21, 1915, elementary target practice has been held, the department's strategical maneuver No. 2 has been carried out, and the summer maneuvers completed.

2. The results have been very satisfactory, and this information may be of additional value to the department at the present time.

TARGET PRACTICE.

3. The commander in chief is pleased to report a marked improvement in the scores made. Comparing this practice with the corresponding practice of last year, for which the rules have remained practically the same, the fleet gunnery officer reports improvement, as follows:

First division—*Wyoming*, *Arkansas*, *Texas*, 41.8 per cent.

Second division—*Utah*, *Florida*, *South Carolina*, *Michigan*, 15.4 per cent.

Third division—*Virginia*, *New Jersey*, *Nebraska*, *Georgia*, 42 per cent.

4. This shows an average increase for the foregoing vessels of something over 30 per cent.

5. The rules of the competition have varied from year to year, so that it is difficult to make an exact comparison with the work of preceding years, but, making due allowance for all changes. it is believed the scores recorded above are higher than ever made before in the open sea.

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All scores show not only an increase in accuracy of pointing but in rapidity of fire as well.

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6. Most of the firing was done under very favorable conditions of sea, but the improvement was due in a large measure to the steps that have been taken to ascertain the errors of gunfire and improve the gunnery efficiency of the fleet. In carrying out this plan boards of officers were appointed to make an accurate record of the data in

each step that takes place in the cycle of fire control—this with a view to analyzing and locating the causes of errors. Other boards were appointed to investigate and standardize the methods of training and control in the different types of ships. These boards suggested means and assisted in eliminating faulty methods and in concentrating the attention of gunnery officers on the vital elements affecting the control of gunfire.

7. The first boards referred to above followed the general lines laid down by the board of expert observers appointed a year ago to witness elementary target practice of the *Michigan*. It is believed that the boards assisted greatly not only by their helpful suggestions but by concentrating the attention of officers on the various sources of error that must be guarded against to secure satisfactory results. A systematic plan is in operation having for its object the determination of errors, their analysis, and elimination. Methods of training and control are being standardized, and the resultant efforts and enthusiasm of the entire personnel gives promise of still further improvement.

DEPARTMENT STRATEGICAL MANEUVER NO. 2.

8. The object of these maneuvers as defined by the general board was to exercise the available Atlantic Fleet as a single command under approximate war conditions. The plan adopted for carrying out these maneuvers was well suited for exercising the fleet and trying out its operating efficiency in all its units of command, in testing the material, and in exercising the personnel. At the same time it required and simulated movements and conditions that might obtain in war. The results showed the fleet to be in a very satisfactory state of efficiency with the exceptions noted in the report upon the maneuvers.

9. Seventy-eight vessels of different types took part in this problem and operated under the various sea conditions encountered, scouting and maneuvering at night without lights and at high speeds. Subordinate commanders and commanding officers formed a rendezvous at sea with precision, interpreted and executed the orders of the commander in chief correctly, and displayed initiative and skill in handling new situations. At all times during the problem the ships were maintained on a war basis with decks cleared and officers and men at their stations night and day. In addition to the usual lookouts, special lookouts were detailed for enemy aeroplanes and submarines. The commander in chief was at all times in close touch with the Navy Department, using direct communication between his flagship and the Arlington Radio Station. Direct communication by means of the smaller radio equipment was maintained for a distance of about 350 miles offshore, after which the primary system of communication was employed. The commander in chief was also in direct touch with all his subordinate commanders at all times and additional orders and modifications of plans were made without difficulty as the problem progressed. To keep all forces in touch with developments the commander in chief issued two bulletins daily containing such information of enemy forces and of our own forces as would prove of general use and interest. Similar bulletins were sent

to the department, as well as the 8 a. m. and 8 p. m. positions. During the progress of the problem a number of constructive casualties were sent to the department to simulate the conditions of actual war and to assist the department in developing their organization and facilities for coöperating with the fleet.

10. All the operations in these maneuvers were successfully carried out with the exception of the movements of the submarines, and the results reflect credit on the personnel and material of the fleet.

SUMMER MANEUVERS—INCREASING SIZE OF THE FLEET.

11. The summer program of the fleet was largely given up to developing and exercising the major organizations of the fleet as separate commands. These separate commands exercised at torpedo firing, mining, sweeping, night search, gunnery training, steaming exercises, coaling at sea, etc.

12. While in Narragansett Bay a large number of officers were detailed to the War College to attend the specially prepared course of instruction and lectures intended to keep the officers of the fleet in closer touch with the work of the War College. For a part of the summer two divisions of battleships were based on Cape Cod Bay with a view to familiarizing officers and men with the conditions in that locality.

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13. During the past year the number of units assigned to the fleet has been increased more than 15 per cent, resulting in a better balanced fleet, as was shown by the maneuvers in August. There are now in the Atlantic Fleet 118 vessels of various types, manned by a force of more than 27,000 men. Among the vessels added are two mine layers, the *Baltimore* and the *Dubuque*. These vessels, together with the *San Francisco* and four tugs, are especially employed in the important work of mining and sweeping. A number of new destroyers have been added, bringing up the strength of the destroyer flotilla toward the proportions recommended by the General Board; that is four destroyers for every battleship. Three large fuel ships, the *Cyclops*, *Orion*, and *Jupiter*, have been added to the fleet, greatly facilitating the work of fueling the fleet, and making it independent of local sources of fuel supply. In the feature of rapid fueling the Atlantic Fleet is believed to have made records that are not surpassed by any other fleet. The *Cyclops* is fitted with a device for coaling at sea which has demonstrated its utility in coaling three battleships under various sea conditions with satisfactory rates of delivery. The same coaling engine has demonstrated its fitness for towing, by satisfactorily towing both battleships and destroyers.

14. A number of tenders have been added that have assisted in keeping in repair the destroyers and submarines and rendering them less dependent on shore stations for their upkeep.

15. The addition of these various vessels has provided a better balanced fleet—that is, a fleet better adapted for carrying on the various operations of war. The addition of these units has required a modification of the organization of the fleet so as to permit the combining of similar types of vessels under separate organizations,

with a view of permitting each type to satisfactorily develop its special uses as well as to facilitate the command and control of the whole fleet.

16. The commander in chief believes that the forming of the cruiser squadron has been a marked advance in the organization of the fleet, and the formation of other types of vessels into squadrons will be recommended to obtain more effective operation. While important events in the Mediterranean, Caribbean, and Mexican waters were being satisfactorily handled, the rest of the fleet was left free to carry on, without interruption, the department's strategical problem No. 2, which permitted all organizations of the fleet, except the cruiser squadron, to be operated and exercised under the direct orders of the commander in chief.

F. F. FLETCHER.

64TH CONGRESS, } SENATE. { EX. DOC. B,
1st Session. } { PT. 2.

ACTION TAKEN TO ADVANCE THE EFFICIENCY OF THE ATLANTIC FLEET.

JANUARY 14, 1916.—Referred to the Committee on Naval Affairs and ordered printed in confidence for the use of the Senate.

JANUARY 19, 1916.—Injunction of secrecy removed.

Mr. TILLMAN submitted the following

LETTER FROM THE SECRETARY OF THE NAVY, TRANSMITTING TO THE CHAIRMAN OF THE SENATE COMMITTEE ON NAVAL AFFAIRS CERTAIN STATEMENTS RELATIVE TO THE ACTION TAKEN BY THE NAVY DEPARTMENT TO ADVANCE THE EFFICIENCY OF THE ATLANTIC FLEET.

THE SECRETARY OF THE NAVY,
Washington, January 11, 1916.

MY DEAR MR. CHAIRMAN: In response to Senate resolution No. 60 I have to-day transmitted to the President of the Senate the annual report of the commander in chief of the Atlantic Fleet for the year ending June 30, 1915, and a supplementary report of fleet operations to October 15, 1915; and for the information of your committee I am giving you below several statements regarding the action which has been taken by the department to advance the efficiency of the fleet in accordance with the recommendations of the commander in chief.

The commander in chief prefaces his report by stating that "in order to limit the report to moderate length it has been found necessary to omit discussions of the many satisfactory features of the fleet and to invite attention more particularly to its operations, condition, and requirements," so it may properly be concluded that this report is an account of the needs of the fleet and suggestions designed to supply them.

As you are informed on the naval situation you are aware that "the principal weaknesses and requirements of the fleet," summarized by the admiral on page 23 of his report, have been of long standing. Some were in process of correction before his report was written. Others within the scope of the department's authority have since been remedied, and recommendations are already before Congress for such other needs as the department has approved and can not provide without congressional action. We have already acted upon practically every suggestion and steps have been taken to remedy the conditions.

The admiral reports the principal weaknesses and requirements of the fleet to be as follows:

(*a*) Shortage of officers.
(*b*) Shortage of men.
(*c*) Lack of fast armored ships and fast light cruisers.
(*d*) Limitations of mobility and seagoing qualities of submarines.
(*e*) Lack of air craft.
(*f*) Lack of radio direction finder.
(*g*) Too frequent overhaul of battleships.
(*h*) Necessity of maintaining full complements in active ships in the fleet.
(*i*) Need of additional mining and sweeping vessels.
(*j*) Desirability of mobilizing ships in reserve annually with the active fleet.
(*k*) Need of battle target practices at long ranges.
(*l*) Necessity for increased facilities at fleet rendezvous.
(*m*) Provision for division commanders for mining division and auxiliary division.
(*n*) Provision for more speed in design of fighting craft intended to operate with the fleet.
(*o*) Need of anti air-craft guns.

Responsibility for the existing shortage of officers is attributable, of course, to conditions antedating my incumbency as Secretary of the Navy. The first man to enter Annapolis under the present administration is still a midshipman, and will not graduate until 1917. Deficiencies are most pronounced, as indicated by Admiral Fletcher, between the grades of captain and junior lieutenant. The present commanders graduated from Annapolis from 20 to 25 years ago, and the most recently commissioned junior lieutenant received his diploma at Annapolis in 1912.

The number of officers in these and the higher grades, as you know, are limited by an act of Congress passed in 1899. During the intervening years the Navy was substantially increased by legislation, and any shortage of officers in these grades is owing to lack of provision for increasing the number of midshipmen at the time when increases in material were authorized.

But if our battleships are short of officers to-day they have been short during all the preceding years. The standard complement has not been changed, and the one now in vogue is the one which has been in operation for a long term of years. If the *Delaware* is to-day short of officers with a complement of 27 line officers, only 13 of whom are ensigns, she was short also in March, 1913, when she had but 26, of whom 17 were ensigns. To-day she has 14 officers above the grade of ensign, whereas on the earlier date she had but 9. And so, too, with the *Wyoming*, *Arkansas*, *Florida*, and *Utah*, the other dreadnaughts then and now operating with the fleet. If they lack officers above the grade of ensign to-day, manned by 15, 16, 14, and 14, respectively, an average of 14¾ above the grade of ensign, they were also short on March 1, 1913, when they had only 11, 12, 13, and 11, respectively, or an average of 11¾ per ship. Officers, as Admiral Fletcher emphasizes, can not be made in a day; therefore the existing shortage of officers is due to the lack of provision 6 to 10 years ago.

One of my first recommendations to Congress, transmitted but a few weeks after I assumed office, urged the extension of the law of

1907 providing for two midshipmen to each Member of Congress. That law was to have expired the 30th of the following June, as the preceding Congresses had not extended its life. Feeling the necessity of remedying, as far as I was able, the shortage of officers then existing, I urged this course upon Congress, and owing to its favorable action, more than 300 new midshipmen entered the academy that summer. If such action had not been taken only half as many would have entered. This increase will be felt, of course, as soon as the class entering in 1913 graduates from the academy.

There is now before Congress my current recommendation that the number of midshipmen at Annapolis be further increased by one additional midshipman for each Member of Congress, 531. I hope most earnestly that favorable action will be taken, and if so it is altogether improbable that future admirals will feel impelled to direct the department's attention to a shortage such as that to which Admiral Fletcher refers.

There are also before Congress certain other recommendations which I have made, providing for the immediate commissioning of a number of qualified engineers and aviators. These recommendations were made in recognition of the time required to obtain officers through Annapolis, and to supply the immediate requirements of the fleet in these branches. The acquisition of the number of such officers recommended will relieve the existing shortages considerably until the service feels the result of the increased number of officers now undergoing training for engineering and aviation duties.

During the last two years a number of new vessels have been completed, and because of conditions throughout the world, and particularly in the Gulf and Carribean waters, the Navy has been called upon to commission a number of ships formerly held in reserve. While on the 1st of March, 1913, only 182 serviceable vessels were in commission the fleet had grown so that on December 1, last, there were in commission 238 serviceable vessels. To man these new vessels and to commission for active service those others which were formerly in reserve required the active services of a larger number of men than were required two and one-half years ago.

To meet this condition additional men were necessary, and recruiting was one of the first matters to receive our attention. The Navy was not attracting new men in sufficient numbers, nor was it retaining for further service the large number of experienced men whose enlistments were expiring daily.

From March, 1909, to March, 1913, there were 10,360 desertions. Only 54 per cent of the men discharged in good standing reenlisted, and while Congress had increased the authorized strength of the Navy in August, 1912, there were actually fewer men enrolled on March 3 following than at the close of the preceding fiscal year. Under the law it was possible to enlist 52,974 men, but on the 3d day of March, 1913, the number totaled only 47,347. It was manifestly plain that these conditions would have to be corrected, for without additional men the large number of ships now required in active service could not have been commissioned. You will be gratified to learn, I am sure, that this deficiency of nearly 6,000 men has been overcome, and that there are to-day over 53,000 men in the service. Desertion is rapidly disappearing, and we are reenlisting 85 per cent of the men who have received discharges permitting their reenlistment. When the fleet sailed for Guantanamo on the 6th of this month the complement of every vessel, including destroyers, was filled, and the department is reliably informed that the enlisted complements of our ships are as liberal as those of similar ships in one of the great navies now at war. Looking to the future, I have recommended to this Congress that the enlisted strength of the Navy be increased by 7,500 men, 2,500 apprentice seamen, and 1,500 marines. This number, added to the full quota now enrolled, will prove sufficient to meet the immediate needs of the service in this respect.

The building program recommended to Congress provides for the construction of a number of vessels of the types reported lacking by the Admiral. Ships, like officers, can not be made in a day, and such shortages in ships as now exist are due, of course, to the failure to lay them down three or more years ago, for it takes about three years in which to construct a ship.

All submarines now completed or under construction under acts of Congress antedating March 4, 1913, are of the coast defense type. They were not designed for the qualities described now lacking in the fleet, as stated by Admiral Fletcher.

Our first submarine of the seagoing type was authorized in the first naval appropriation bill passed after March 4, 1913. The second bill contains provision for the construction of two more, and the program now before Congress with my indorsement provides for the construction of a liberal number of vessels of this type.

The department is not content, however, with the performances of the submarine flotilla now in commission, and has for some time been giving diligent study to the submarine situation. It should be recalled that prior to 1913 no submarine organization existed. The nine submarines in commission with the Atlantic Fleet were appended to the destroyer flotilla, while two more were in commission unattached and two were in reserve. Of the 11 boats in commission, 2 were commanded by lieutenants, 2 by lieutenants (junior grade), and 7 by ensigns, and these officers, with 14 additional ensigns under instruction, 1 lieutenant, 3 lieutenants (junior grade), and 3 ensigns on tenders constituted the commissioned strength of our submarine service as late as two and one-half years ago.

It was felt that much better results could be achieved by the assignment of more experienced officers to these important duties, and a reorganization has been underway for some time. To-day there are assigned to the submarine flotilla with the Atlantic Fleet a rear admiral, a commander, a lieuenant commander, 15 lieutenants, 35 lieutenants (junior grade), and 3 ensigns. Ten additional officers are with the flotilla under instructions. This expansion in personnel has enabled the assignment of two officers each to 11 of the 12 submarines in northern waters; and when additional officers have finished their courses of instruction two officers will be assigned to all submarines. Of the five boats at Panama three are now commanded by lieutenants (junior grade) and two by senior lieutenants.

The reorganization of the submarine flotilla has involved the training of men, as well as officers, preparatory to their being assigned to submarine duty. No man will now go aboard a submarine unless he has been specially trained for the work, and on the cruiser

Columbia, the flagship of the submarine flotilla, there are now a large number of men receiving instruction. Only recently 40 officers and 85 men concluded a course of instruction in battery work at the plant of the Electric Storage Battery Co. and that of Thomas A. Edison. Such instruction is absolutely essential to the efficient handling of these vessels. The preliminary training of crews (the crews, officers, and men of four L boats not yet delivered are already trained and assembled) will, it is believed, result in higher efficiency and reduce to a minimum former defects in our submarine service due to the inexperience of crews.

Our present air fleet is as yet not more than two years of age, and considering the time in which aeronautics has been given the consideration it deserves in the Navy, its progress is really gratifying. Two and one-half years ago we had but four aviators and no satisfactory machine. During the intervening time 21 commissioned officers have qualified as air pilots, and 14 more, besides 10 petty officers and 131 enlisted men, are under instruction for the various duties required of aviators.

A special training school for aviators has been established at Pensacola, Fla., where this corps is now operating, and by the 1st of March 37 machines will be in operation at the station. Not only has it been necessary to instruct aviators, but also to design air craft. Our progress in this work is such that it is expected our aviators will be exercising with the fleet during this winter's maneuvers, and that soon thereafter a division of ships with complements of flying machines and aviators will become part of the regular fleet organization.

The question of frequent overhauling of battleships was one of the first to receive the attention of Rear Admiral Benson, the first Chief of Naval Operations, who was appointed by the President on the 11th day of April, 1915. Instances are frequent where battleships less than two years of age have, in accordance with the routine schedule, proceeded to a navy yard for overhauling. Under the new system no vessel will go into overhaul until after she has been subject to inspection by the Board of Inspection and Survey, and the equipment for her repairs assembled ready for immediate work on the arrival of the vessel at the yard. This practice will assure the presence of all vessels with the fleet, except in cases where urgent repairs are required, and by the assembling of material prior to the arrival of vessels at yards their absences from the fleet will be reduced to the shortest time possible.

In the preliminary design of ships, construction of which is now recommended to Congress, provision has been made for increased speed in various types of fighting craft intended to be incorporated in the fleet.

As for the need of antiair-craft weapons, these defects will presently be remedied. As in the case of submarines, air-craft, and mining apparatus, it was necessary for the department to make a fresh start after I came into office. No satisfactory type of anti-air-craft gun existed. One had to be designed, manufactured, and tested. All this has been accomplished within the last 18 months. Work on the manufacture of a quantity of such guns was begun some time ago, and the first allotment will be placed on board ships of the fleet within three months.

We early recognized the importance of mining and mine-sweeping equipment, and immediate steps were taken in the spring of 1913 to develop this important arm of the service. In March, 1913, the Navy had but one mine-depot ship, the *San Francisco*. The act of Congress of 1908, which provided for the conversion of the *San Francisco* into a mine-depot ship, provided also for the conversion of the *Baltimore*, but up to March, 1913, this work had not been completed. It was immediately pushed, and the *Baltimore* joined the fleet some time ago. Since then, the mining division has been organized, and the mine layer *Dubuque* and a number of fleet tugs equipped as sweepers, have been assigned to it for conducting experiments and the training of crews. This organization, as will be noted, has also been created within the last two years. A large number of other vessels of the fleet have been equipped with mine-laying and mine-sweeping devices for use in emergencies. We have further realized the entire practicability and the great value of light merchant craft for this service and have investigated and surveyed a large number of these vessels considered suitable for such uses in time of war. With the knowledge that has been acquired in the mining division of the fleet the Navy is better prepared than ever before for the quick and proper equipping and manning of such additional vessels as it may be found necessary to utilize.

Our activities in mining work have extended to the equipment of the fleet with entanglements, nets, and mines.. No such equipment, except a few mines of an antiquated type, was in existence, or even designed, up to two years ago. The first order for nets was placed on April 21 of this year, and a considerable quantity is already in southern waters for use in connection with the maneuvers of the fleet in Caribbean waters this winter. The utility of such equipment is so favorably regarded by the department that I have in my estimates this year added an item of $40,000 for the acquisition of more.

The commander in chief also recommends division commanders for the mining division and the auxiliary divisions. These recommendations were approved some time ago, and divisional commanders provided. In this connection I desire to transmit, for the information of the committee, the attached diagram showing the organization of the Atlantic Fleet on January 1 of this year as compared with its organization on March 1, 1913. These diagrams conclusively demonstrate the satisfactory progress that has been made in the more efficient organization of that well-balanced fleet, which is the object of our efforts.

It will be noted that in his supplementary report, Admiral Fletcher refers specifically to the fact that "during the past year the number of units assigned to the fleet has been increased 15 per cent, resulting in a better-balanced fleet," and that the addition of the various types of vessels "has provided a better-balanced fleet; that is, a fleet better adapted for carrying on the various operations of war."

The commander in chief also reports, as you will note, that "while the rules of the competition (gunnery) have varied from year to year, and it is difficult to make an exact comparison with the work of preceding years, by making due allowance for all changes it is believed the scores recorded (elementary target practice this summer) are higher than ever before made in the open sea," and that "all scores show not only an increase in accuracy of pointing but in rapidity of fire as well." The admiral adds that "the improvement was due, in a large measure, to the steps that have been taken to ascertain the errors of gunfire," etc. This systematic investigation of errors, too, is a creation of the last two years.

In conclusion, Mr. Chairman, let me add that the foregoing facts demonstrate conclusively that the fleet is better organized, the ships more fully manned and more competently officered than heretofore, that our gunnery is steadily improving, and that most of the requirements of the fleet, enumerated by the commander in chief, while of long standing, have already been largely corrected.

Very truly, yours,

JOSEPHUS DANIELS.

Hon. B. R. TILLMAN,
Chairman Senate Committee on Naval Affairs,
Washington, D. C.

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